

Fig. 1

Performance Characteristics

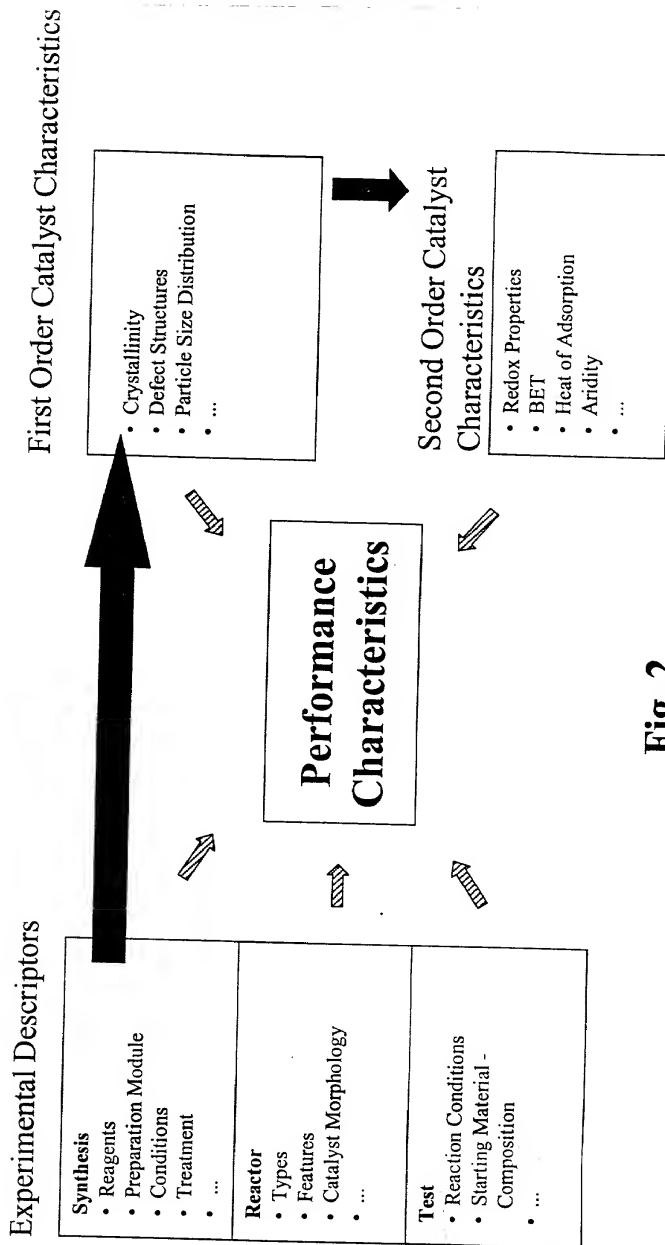


Fig. 2

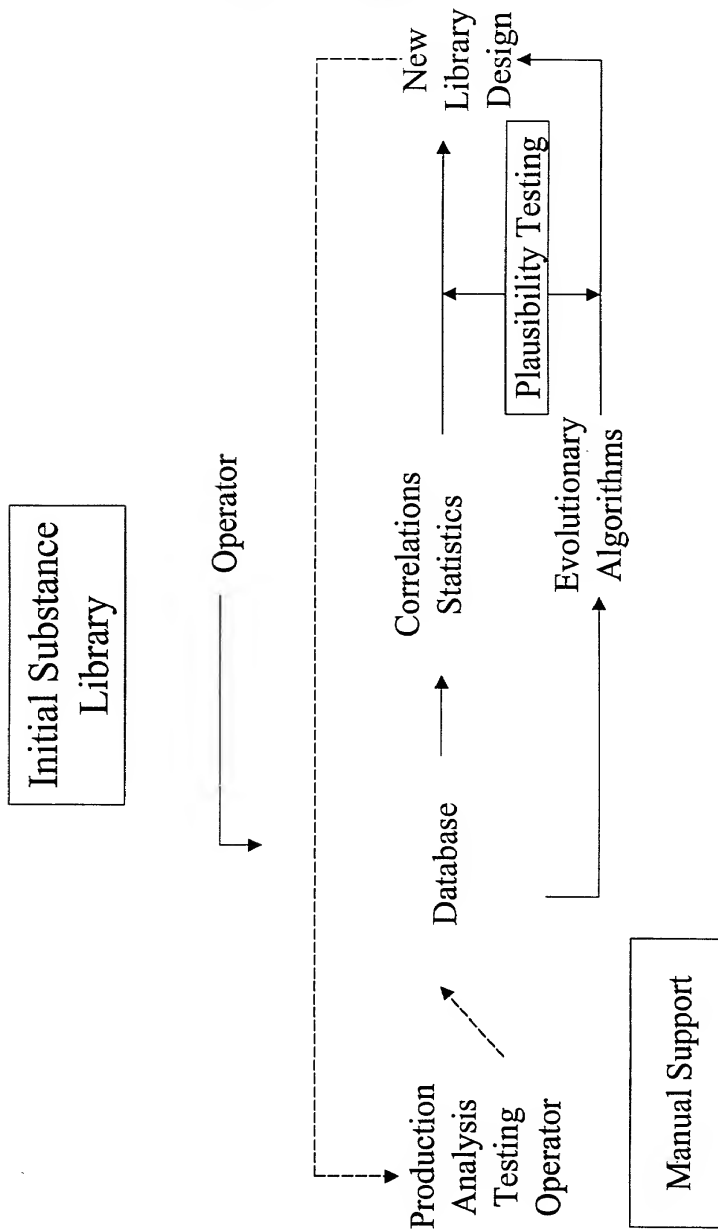


Fig. 3

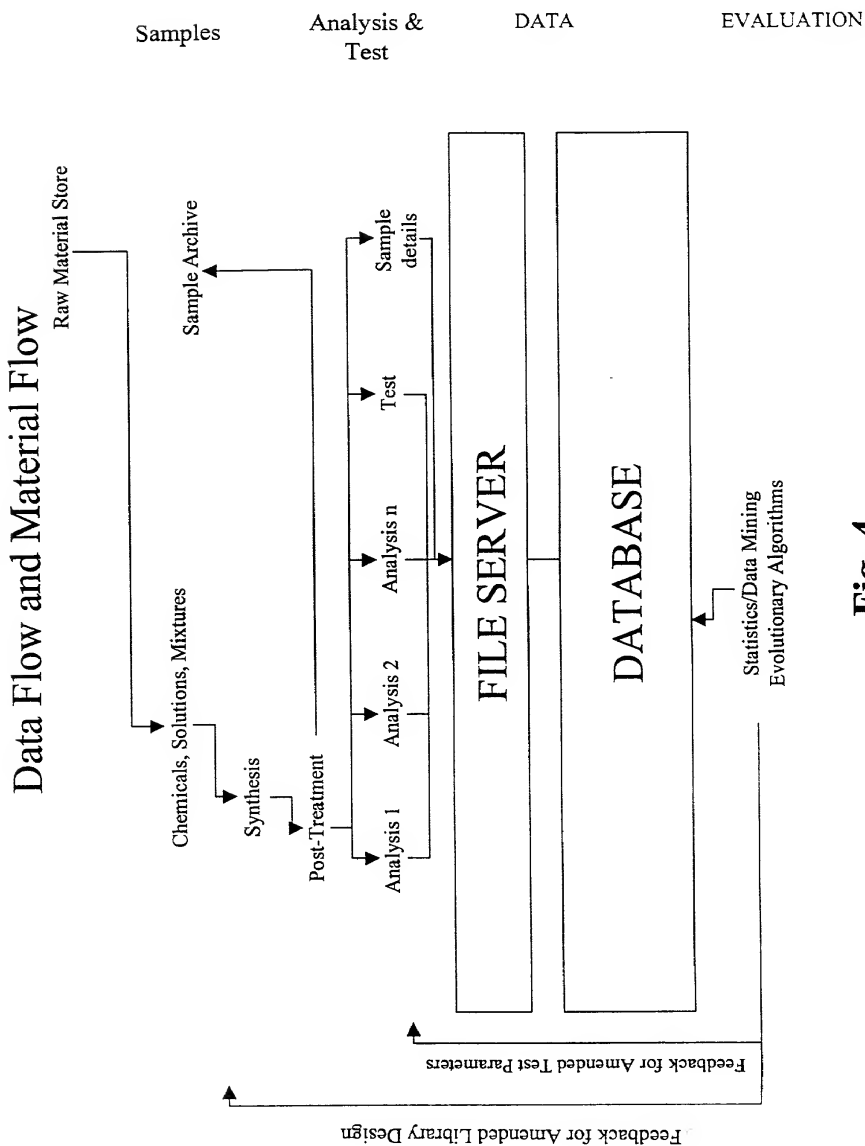
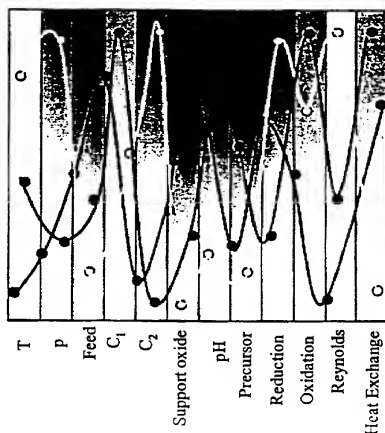


Fig. 4

Original Library Design and Tests Using the Entire Parameter Space

Step 1: Design of Library, Test
and Process Conditions



Step 2: Data Acquisition

	Experiment 1	Experiment 2	Experiment n
T			
P			
Feed			
C ₁			
C ₂			
Support oxide			
pH			
Precursor			
Reduction			
Oxidation			
Reynolds			
Heat Exchange			

Activity	++	+	+++
Selectivity	+	++	-

Fig. 5a

Regression Analysis, Energies of the Parameter Space

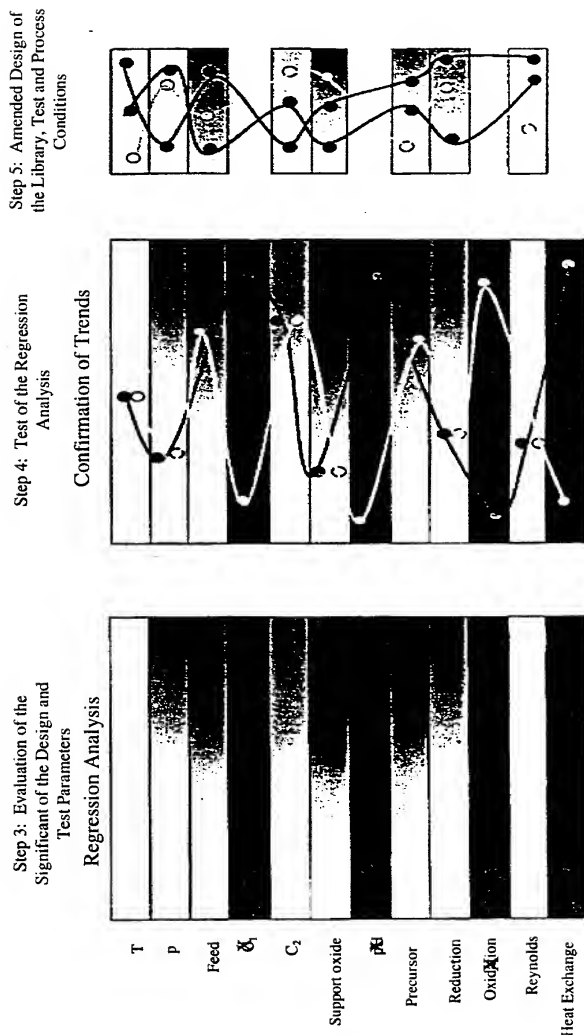


Fig. 5b

Principle of Genetic Algorithms

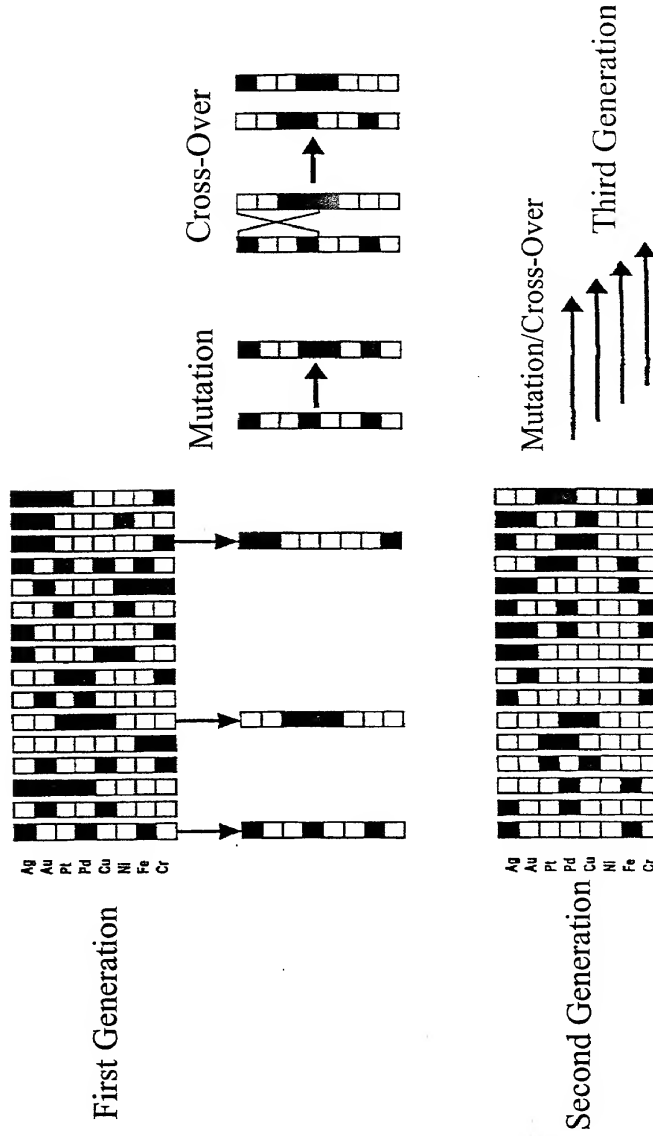


Fig. 5c

Sensitivity Analysis of the Parameters of the Initial Library Pareto Diagram

Pareto Chart of Standardized Effects; Variable: U_NOX
 7 factors, 5 Blocks, 96 Runs; MS Residual=128,2875
 DV: U_NOX

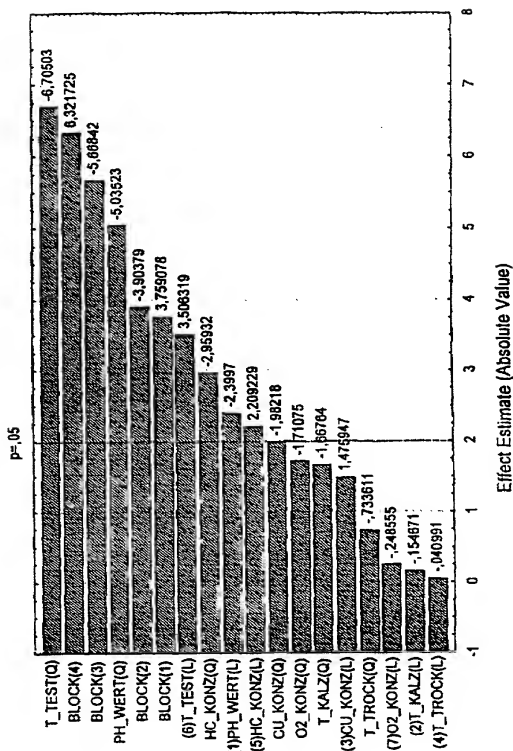


Fig. 6

Sensitivity Analysis of the Parameters of the 1st Optimized Library Pareto Diagram

Pareto Chart of Standardized Effects, Variable: U_NOX
4 factors, 2 Blocks, 48 Runs; MS Residual=89,09295
DV: U_NOX

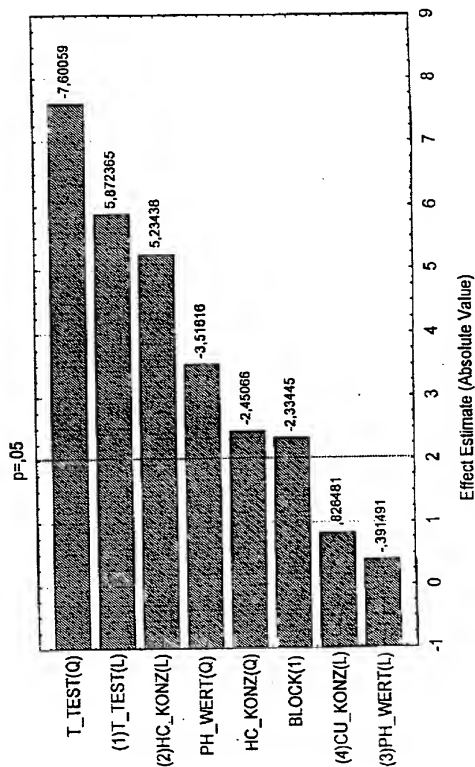


Fig. 7